

US009636989B2

## (12) United States Patent

Amemiya et al.

# (54) DEVICE FOR CONTROLLING HYBRID VEHICLE

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(\*) Notice: Subject to any disclaimer, the term of this

patent is extended or adjusted under 35

U.S.C. 154(b) by 0 days.

(21) Appl. No.: 14/913,423

(22) PCT Filed: Aug. 8, 2014

(86) PCT No.: **PCT/JP2014/071006** 

§ 371 (c)(1),

(2) Date: Feb. 22, 2016

(87) PCT Pub. No.: WO2015/045643

PCT Pub. Date: Apr. 2, 2015

(65) Prior Publication Data

US 2016/0200310 A1 Jul. 14, 2016

#### (30) Foreign Application Priority Data

Sep. 26, 2013 (JP) ...... 2013-199649

(51) **Int. Cl.** 

 B60K 6/46
 (2007.10)

 B60W 20/00
 (2016.01)

 B60K 6/48
 (2007.10)

 B60K 6/547
 (2007.10)

(Continued)

(52) U.S. Cl.

CPC ....... *B60K 6/48* (2013.01); *B60K 6/547* (2013.01); *B60L 11/14* (2013.01); *B60L 15/20* (2013.01);

(Continued)

### (10) Patent No.: US 9,636,989 B2

(45) **Date of Patent:** 

May 2, 2017

#### (58) Field of Classification Search

See application file for complete search history.

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#### (57) ABSTRACT

A hybrid vehicle control device includes an engine, a motor/generator, an automatic transmission in which the gear ratio can be fixed by the driver's intention; and a drive wheel. The control device has an assist traveling mode and an engine generation traveling mode as hybrid modes in which the engine and the motor/generator are drive sources. The control device includes a rotational speed limit setting unit which sets a value that exceeds the upper rotational speed limit, at which the motor/generator can carry out a torque output, as the rotational speed limit of the engine motor rotational speed, and a rotational speed limit control unit for reducing the rotational speed limit to the rotational speed limit at which the motor/generator can carry out a torque output, when the engine motor rotational speed has reached the rotational speed limit and there is a torque output request of the motor/generator.

#### 17 Claims, 9 Drawing Sheets

